

Application No. 09/743,004
Amendment "D" dated December 14, 2005
Reply to Office Action mailed June 16, 2005

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 and 2. (Cancelled).

Claim 3. (Currently Amended) A mobile station of a mobile communications system, said mobile station communicating with a plurality of base stations, [[and]] said mobile communication system deciding sectors said mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to said mobile station, said mobile station comprising:

means for recording the group of the channel identifier;

means for receiving the channel identifier from the base station; and

means for prior searching for other channel identifiers in a same group as the channel identifiers received by said receiving means belongs to, [[first,]]

wherein said mobile communications system assigns channel identifiers belonging to a same group to the sectors in a same base station.

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Claim 4. (Original) The mobile communications system as claimed in claim 3, wherein said mobile communications system assigns contiguous base stations channel identifiers belonging to other groups.

Claims 5 and 6. (Cancelled).

Claim 7. (Previously Presented) A method of searching for a neighboring cell utilizing information sent from sectors to a mobile station in a mobile communications system allowing the mobile station communicating with a plurality of base stations to decide a sector the mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to the mobile station, said method comprising the steps of:

assigning channel identifiers belonging to a same group to the sectors within a same base station; and

sending from a base station to a visiting mobile station a notification of any one of channel identifiers assigned to sectors of one of neighboring base stations, and/or a notification of a group number to which the channel identifiers belong,

wherein the channel identifier notified in the step of sending a notification is a channel identifier of a sector which belongs to the neighboring base station and to which the greatest number of the mobile stations make handover from a current sector.

Claim 8. (Cancelled).

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Claim 9. (Currently Amended) A method of searching for a neighboring cell in a mobile communications system allowing ~~[[the]]~~ a mobile station communicating with a plurality of base stations to decide a sector the mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to the mobile station, said method comprising the steps of:

assigning channel identifiers belonging to a same group to the sectors within a same base station; and

prior searching for other channel identifiers in the same group as the channel identifier of a sector already-captured by the mobile station ~~[[, first]]~~.

Claim 10. (Currently Amended) A mobile station of a mobile communications system, said mobile station communicating with a plurality of base stations, and said mobile communications system deciding sectors said mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to said mobile station, said mobile station comprising:

means for recording the group of the channel identifier;

means for receiving the channel identifier from the base station; and

means for prior searching other channel identifiers in a same group as the channel identifier received by said receiving means belongs to ~~[[, first]]~~;

wherein said mobile communications system includes:

means for assigning channel identifiers belonging to a same group to the sectors within a same base station; and

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means for sending from a base station to a visiting mobile station a notification of ~~[[anyone]]~~ any one of channel identifiers assigned to sectors of one of neighboring base stations, and/or a notification of a group number to which the channel identifiers belong.

Claim 11. (Currently Amended) A mobile communications system allowing the mobile station communicating with a plurality of base stations to decide a sector the mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to the mobile station, said mobile communications system comprising:

means for assigning channel identifiers belonging to a same group to the sectors within a same base station; and

means for sending from a base station to a visiting mobile station a notification of ~~[[anyone]]~~ any one of channel identifiers assigned to sectors of one of neighboring base stations, and/or a notification of a group number to which the channel identifiers belong, wherein the channel identifier notified by said means for sending a notification is a channel identifier of a sector which belongs to the neighboring base station and to which the greatest number of the mobile stations make handover from a current sector.

Claim 12. (Currently Amended) A mobile communications system allowing ~~[[the]]~~ a mobile station communicating with a plurality of base stations to decide a sector the mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to the mobile station, said mobile communications system comprising:

means for assigning channel identifiers belonging to a same group to the sectors within a same base station; and

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means for searching for other channel identifiers in the same group as the channel identifier of a sector already-captured by the mobile station [[, first]].

Claim 13. (Currently Amended) A base station in a mobile communications system allowing the mobile station communicating with a plurality of base stations to decide a sector the mobile station waits for or communicates with, by using grouped channel identifiers sent from sectors to the mobile station, said base station comprising:

means for assigning channel identifiers belonging to a same group to the sectors within a same base station; and

means for sending from the base station to a visiting mobile station a notification of [[anyone]] any one of channel identifiers assigned to sectors of one of neighboring base stations, and/or a notification of a group number to which the channel identifiers belong,

wherein the channel identifier notified by said means for sending a notification is a channel identifier of a sector which belongs to the neighboring base station and to which the greatest number of the mobile stations make handover from a current sector.

Claims 14-37. (Cancelled).

Claim 38. (Previously Presented) The mobile communications system as claimed in claim 3, wherein the channel identifier consists of a spreading code or a carrier frequency.

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Claim 39. (Previously Presented) The method of searching for a neighboring cell as claimed in claim 7, wherein the channel identifier consists of a spreading code or a carrier frequency.

Claims 40-42. (Cancelled).

Claim 43. (Previously Presented) The mobile communications system as claimed in claim 3, wherein the channel identifier is included in a perch channel signal.

Claim 44. (Previously Presented) The method of searching for a neighboring cell as claimed in claim 7, wherein the channel identifier is included in a perch channel signal.

Claims 45-49. (Cancelled).

Claim 50. (Previously Presented) The method of searching for a neighboring cell as claimed in claim 9, wherein the channel identifier consists of a spreading code or a carrier frequency.

Claim 51. (Previously Presented) The method of searching for a neighboring cell as claimed in claim 9, wherein the channel identifier is included in a perch channel signal.

Claims 52-55. (Cancelled).

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Claim 56. (Previously Presented) The mobile station as claimed in claim 11, wherein the channel identifier consists of a spreading code or a carrier frequency.

Claim 57. (Previously Presented) The mobile station as claimed in claim 11, wherein the channel identifier is included in a perch channel signal.

Claim 58 (Previously Presented) The mobile communications system as claimed in claim 10, wherein the channel identifier consists of a spreading code or a carrier frequency.

Claim 59. (Previously Presented) The mobile communications system as claimed in claim 10, wherein the channel identifier is included in a perch channel signal.

Claim 60. (Currently Amended) A mobile station of the mobile communications system as defined in claim 12, said mobile station comprising:
means for recording the group of the channel identifier;
means for receiving the channel identifier from the base station; and
means for prior searching other channel identifiers in a same group as the channel identifier received by said receiving means belongs to [[, first]].

Claim 61. (Previously Presented) The mobile station as claimed in claim 60, wherein the channel identifier consists of a spreading code or a carrier frequency.

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Claim 62. (Previously Presented) The mobile station as claimed in claim 60, wherein the channel identifier is included in a perch channel signal.

Claim 63. (Previously Presented) The mobile communications system as claimed in claim 12, wherein the channel identifier consists of a spreading code or a carrier frequency.

Claim 64. (Previously Presented) The mobile communications system as claimed in claim 12, wherein the channel identifier is included in a perch channel signal.

Claim 65. (Currently Amended) The base ~~stations~~ station as claimed in claim 13, wherein the channel identifier consists of a spreading code or a carrier frequency.

Claim 66. (Currently Amended) The base ~~stations~~ station as claimed in claim 13, wherein the channel identifier is included in a perch channel signal.

Claims 67-126. (Cancelled).